EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Andrew Wilford on 7/3/2008.

In the interview various refinements to the claims to improve clarity were discussed. Particularly the relationship between the abscissa variables in independent claim 16 and dependent claims 3-8. Other minor formal matters were discussed. The agreed upon changes are reflected in the following amendments.

The application has been amended as follows:

Claim 2, line 12, change "abscissa Al" to --abscissa A--.

Claim 3, line 12, after "sequence" and before the colon, add --, $C_I(k)$ being the in phase component of the channel coefficient C(k) and $C_Q(k)$ being the quadrature component of the channel coefficient C(k)--.

Claim 4, line 12, after "sequence" and before the colon, add --, $C_I(k)$ being the in phase component of the channel coefficient C(k) and $C_Q(k)$ being the quadrature component of the channel coefficient C(k).

Claim 5, line 13, after "sequence" and before the colon, add --, $C_I(k)$ being the in phase component of the channel coefficient C(k) and $C_Q(k)$ being the quadrature component of the channel coefficient C(k)--.

Claim 6, line 9, change "A-1is" to --A-1 is--.

Claim 6, line 13, after "sequence" and before the colon, add --, $C_I(k)$ being the in phase component of the channel coefficient C(k) and $C_Q(k)$ being the quadrature component of the channel coefficient C(k)--.

Claim 7, line 12, after "sequence" and before the colon, add --, $C_I(k)$ being the in phase component of the channel coefficient C(k) and $C_Q(k)$ being the quadrature component of the channel coefficient C(k).

Claim 8, line 13, after "sequence" and before the colon, add --, $C_I(k)$ being the in phase component of the channel coefficient C(k) and $C_Q(k)$ being the quadrature component of the channel coefficient C(k).

Claim 16 has been amended as follows: An iterative method of estimating channel coefficients by interpolation between known channel coefficients, the coefficients being identified by integer abscissa values on a time axis, the known coefficients comprising at least two coefficients with adjacent abscissa values ~~x-1 and x~~ A-1 and A at the left side of an interval and at least one coefficient with abscissa value [[y]] B at the right of the interval, wherein one iteration of the method comprises

calculating an abscissa value as ~~z = FLOOR[(x+y)/2]~~ z = FLOOR[(A+B)/2], and

calculating the coefficient with abscissa z as the arithmetic mean of the coefficients with abscissae values ~~x and y~~ A and B, if ~~x + y~~ A + B is even, and as the arithmetic mean of the coefficients with abscissae values ~~x-1 and y~~ A-1 and B, if ~~x + y~~ A + B is odd, the coefficient with abscissa z constituting a known coefficient for any further iterations.

Claim 17 has been amended as follows: An iterative method of estimating channel coefficients by interpolation between known channel coefficients, the coefficients being identified by integer abscissa values on a time axis, the known coefficients comprising at least one coefficients with adjacent abscissa values [[x]] A at the left side of an interval and at least two coefficients with abscissa values ~~y and y + 1~~ B and B + 1 at the right of the interval, wherein one iteration of the method comprises

calculating an abscissa value as ~~z = CEIL[(x+y)/2]~~ z = CEIL[(A+B)/2], and

calculating the coefficient with abscissa z as the arithmetic mean of the coefficients with abscissae values ~~x and y~~ A and B, if ~~x + y~~ A + B is even, and as the arithmetic mean of the coefficients with abscissae values ~~x and y + 1~~ A and B + 1, if ~~x + y~~ A + B is odd, the coefficient with abscissa z constituting a known coefficient for any further iterations.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: The present invention discloses a method of estimating channel coefficients by interpolation between known channel coefficients by calculating an abscissa value z as the arithmetic mean of abscissa values of two known coefficients, and calculating the coefficient with abscissa z as the arithmetic mean of the coefficients with abscissae values x and y. The closest prior art, Thomas et al. (US 6,141,393) and Yang (US 5,886,911), disclose a similar system which performs channel estimation using linear interpolation of channel coefficients. However, Thomas et al. and Yang fail to disclose the coefficient with abscissa z is the arithmetic mean of the coefficients with abscissae x and y if x+y is even, and the coefficient with abscissa z is the arithmetic mean of the coefficients with abscissae x and y+1, if x+y is odd. This limitation distinguishes claims 17, 9, and 19-21 over the prior art. A similar limitation distinguishes claims 16 over the prior art. Independent claims 16 and 17 and all remaining dependent claims are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID HUANG whose telephone number is (571)270-1798. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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